UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/682,310	10/08/2003	**Mattias Karlsson**	58282 (47137)	7321

21874 7590 01/30/2012

EDWARDS WILDMAN PALMER LLP
P.O. BOX 55874
BOSTON, MA 02205

EXAMINER	
PRICE, CRAIG JAMES	
ART UNIT	**PAPER NUMBER**
3753	
MAIL DATE	**DELIVERY MODE**
01/30/2012	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/682,310	KARLSSON ET AL.	
	Examiner	Art Unit	
	CRAIG J. PRICE	3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 January 2012*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

5)☒ Claim(s) *28,29,35,37,38,40-43,45-49,51,54 and 56-59* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *28,29,35,37,38,40-43,45-49,51,54 and 56-59* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

12)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/11/12 has been entered.

Claims 28,29,35,37,38,40-43,45-49,51,54,56-59 are pending. Claims 1-27,30-34,36,39,44,50,52,53 and 55are cancelled.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 28, 29, 38, 40, 48, 49, 51, 56 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benavides et al. (6,443,179) in view of Orwar et al. (Anal. Chem 2002, 74, 6133-6138).

Regarding claims 28, 29, 48,49 and 59, Benavides et al. disclose, as shown in Figure 21 a macroscale device (110,120 having a tubing outer diameter of 1/16 of an inch), which is interfaced with a microfluidic (100) device using double-sided tape (26, Col.8, Lns. 30-34) or transfer tape (Col.7, Lns. 61-65) to form a stable association between the microfluidic device and the macroscale device, wherein the double sided tape comprises a first adhesive surface which associates with the macroscale device and a second adhesive surface which associates with the microfluidic device, wherein the microfluidic device has a plurality of microchannels (Col.11, Lns. 58-63, Col. 12, Lns. 6-11) suitable for containing a fluid stream. The outlets of the microchannels intersect with at least one of the sensor chambers (the channels 22 intersect with "chambers" 114). Benavides et al. disclose that the system comprises at least three microchannels as shown in Figure 23, and at least one sensor (Col. 11, Lns. 54-56), wherein the sensor is a cell based biosensor (Col. 11, Lns. 54-56, discloses blood cells are dispersed within a fluid in device 100, and therefore, since applicant's has defined a "biosensor" as referring to "a device comprising one or more molecules capable of producing a measurable response upon interacting with a condition in an aqueous environment to which the molecule is exposed" therefor a blood cell is considered as molecules being capable of this function).

Benavides et al. disclose having a sensor but does not explicitly teach that the microfluidic device comprises three or more interdigitating channels and a scanning mechanism for selectively exposing a sensor to multiple fluid streams from the plurality of microchannel outlets, and wherein each of the microchannels have a length and/or width that varies to provide a time delay in delivering a separate aqueous stream and wherein each microchannel comprises an outlet "for delivering a substantially separate aqueous stream into the sensor chamber".

Orwar et al. disclose a cell-based bar code reader which teaches the use of a scanning mechanism (the pipette structure, see Fig A) for selectively exposing a sensor (the cell near the arrow of F2) to multiple fluid streams from three or more microchannel outlets, as shown in Figure A, which utilizes three or more interdigitating microchannels (as shown in Figure C) wherein each of the microchannels have a length (as shown in Figure C, the each of the microchannels have a length and a width) and/or width that varies to provide a time delay in delivering a separate aqueous stream and wherein each microchannel comprises an outlet "for delivering a substantially separate aqueous stream into the sensor chamber".

It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute three or more interdigitating microchannels as taught by Orwar et al. for the microchannels of Benavides et al. and to employ a scanning mechanism for selectively exposing a sensor to multiple fluid streams from the three or more microchannel outlets as taught by Orwar et al. into the device of Benavides et al. in order to develop methods that identify lead compounds with sufficient speed and

accuracy for use in primary and secondary screening against ion channels (Orwar et al., Col. 1, para. 2).

Regarding "for delivery ...sensor chamber", a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Regarding claim 37, Benavides et al. disclose that the one or more sensor chambers is for containing one or more cells (Col.11, Lns. 54-56).

Regarding claim 38, Benavides et al. disclose that the microfluidic device comprises at least one electrical element (58) "for performing planar patch clamp analysis". The limitation "for performing..." is considered as an intended use limitation. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Regarding claim 40, Benavides et al. disclose that the macroscale device comprises a pump head (120) connectable to a pressurized air supply (Col. 11, Lns. 53-54, "Fluids processed by the device can be "gaseous"...).

Regarding claim 51, Benavides et al. disclose a pressure chamber (20) between the macroscale device and the microfluidic device.

Regarding claim 54, Benavides et al. disclose that a cell based biosensor is a receptor, in that within a blood cell, inherently there are receptors such as B cells (BCR) and T cells (TCR).

Regarding claim 56, Benavides et al. disclose that the system comprises three of more delivery channels (as shown in Figure 23) delivering one or more of a sample (Col. 11, Lns. 54-56), an agonist, or an antagonist.

Regarding claim 59, Benavides et al. disclose that the macroscale device contains gas and the microfluidic device contains fluid (Col. 11, Lns. 52-54) which discloses that "fluids processed by the device can be liquid gaseous or a combination of both".

Claims 35 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benavides et al. (6,443,179) in view of Orwar et al. (Anal. Chem 2002, 74, 6133-6138) and further in view of Pfost (5,104,621).

Benavides et al. and Orwar et al. have disclosed all of the features of the claimed invention although are silent to a system, wherein the microchannels correspond in number to the number of wells in a microtiter plate, and, wherein the microchannels connect to reservoirs in the microfluidic device and wherein the center-to-center distance of each reservoir corresponds to the center-to-center distance of the wells in the microtiter plate.

Pfost et al. disclose an analytical automated chemistry processing center which teaches the use of a microtiter plate (Col. 11, Lns. 45-48).

It would have been obvious to one of ordinary skill in the art at the time of invention to utilize microtiter plates as taught by Pfost et al. into the combined system of Benavides et al. and Orwar et al. to have a system wherein the microchannels correspond in number to the number of wells in an industry-standard microtiter plate, and, wherein the microchannels connect to reservoirs in the microfluidic device and wherein the center-to-center distance of each reservoir corresponds to the center-to-center distance of the wells in the microtiter plate, in order to have an automated material handling system which could transfer the samples from one well of one microtiter plate to a different well in another microtiter plate depending on the type of analysis desired (Pfost et al. , Col. 11, Lns. 45-53).

Claims 41-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benavides et al. (6,443,179) in view of Orwar et al. (Anal. Chem 2002, 74, 6133-6138) and further in view of Bjornson et al. (6,103,199).

Benavides et al. and Orwar et al. have disclosed all of the features of the claimed invention although are silent to the system having the macroscale surface interfaced with a microfluidic surface of a device being a pump thereby being selected from the group consisting of a pump head, pump, degasser, flow meter, injector manifold, a pressure sensor, flow cell, concentration manifold or cartridges, a fitting or connector, a mixer, a compressor, an ultrasonic bed, an extractor, a focusing device, a dialysis chamber, an absorption chamber, a metabolite chamber, a toxicity chamber, a cell chamber, a detector, an RFID tag, a reagent vessel, a separation column, a focusing

column, a size exclusion column, an ion-exchange columns, affinity columns, solid-phase extraction beds, a filter, a sieve, a frit, a depth filter, a heater, a heat exchanger, a cooler, a magnetic field generator, electric field generator, electroporation device, patch clamp pipette, and one or more connections thereto, and that the detector is a fluorescence flow cell which is selected from the group consisting of a UV/Visible absorbance flow cell, a fluorescence flow cell, a conductivity flow cell, an electrochemical detector, a plasma detector, surface plasmon resonance detector and a mass spectrometry detector and that the detector is an optical sensor such, selected from the group consisting of a flow meter, a pressure transducer, a temperature sensor, a chemical sensor, an acoustic sensor, a color sensor, an optical sensor, a bar code sensor, a photothermal sensor, a photoacoustic sensor, and an RFID tag.

Bjornson et al. disclose a capillary electroflow apparatus which teaches the use of an optical detection device such as ultraviolet or fluorescence spectrometer (Col. 24, Lns. 1-4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ an ultraviolet optical detection device as taught by Bjornson et al. into the combined assembly of Benavides et al. and Orwar et al. in order to “read the different types of substances being moved to different portions of the medium”, so that “the information can be sent to the computer, which can adjust the speed of the waves or voltage distribution profiles being generated in order to more precisely fine tune the resolution of the substances being moved through the medium” (Bjornson et al. , Col. 24, Lns. 6-12).

Claims 45 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benavides et al. (6,443,179) in view of Orwar et al. (Anal. Chem 2002, 74, 6133-6138) and further in view of Crandall et al. (6,352,766).

Benavides et al. and Orwar e al. have disclosed all of the features of the claimed invention although are silent to at least one adhesive side of the tape surface covered by a release liner prior to adhering the device surface of the macroscale or microfluidic device and adhesives on each side of the double sided tape comprise different types of adhesive and transfer tape forming a stable association between the microfluidic device and the macroscale device, wherein the transfer tape comprises a backing to which an adhesive surface is seperably attached and wherein a bond between the adhesive and the backing is weaker than a bond between the adhesive and the macroscale or microfluidic surface.

Crandall et al. disclose a low adhesion material which teaches a device as having at least one adhesive side of the tape surface is covered by a release liner (Col. 5, Lns. 38-41) prior to adhering the device surface of the macroscale or microfluidic device and adhesives on each side of the double sided tape comprise different types of adhesive (Col. 5, Lns. 41-45).

It would have been obvious to one of ordinary skill in the art at the time of invention to employ a system having at least one adhesive side of the tape surface is covered by a release liner prior to adhering the device surface of the macroscale or microfluidic device and adhesives on each side of the double sided tape comprise different types of adhesive and transfer tape forming a stable association between the

microfluidic device and the macroscale device, wherein the transfer tape comprises a backing to which an adhesive surface is seperably attached and wherein a bond between the adhesive and the backing is weaker than a bond between the adhesive and the macroscale or microfluidic surface as taught by Crandall et al. onto the combined device of Benavides et al. and Orwar et al. in order to permit the easy removal of the liner from the coated article (Crandall et al. , Col.1, Lns 21-30).

Claims 46 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benavides et al. (6,443,179) in view of Orwar et al. (Anal. Chem 2002, 74, 6133-6138) and further in view of DiZio et al. (6,455,152).

Benavides et al. and Orwar et al. have disclosed all of the features of the claimed invention although are silent to the system having the adhesive on the tape is patterned onto a backing and, wherein at least one surface of the tape comprises portions that are coated with adhesive and portions that are not coated with adhesive.

Dizio et al. disclose an adhesive coating article which teaches the use of the adhesive on the tape is patterned onto a backing and, wherein at least one surface of the tape comprises portions that are coated with adhesive and portions that are not coated with adhesive (Col. 5, Lns. 39-41).

It would have been obvious to one of ordinary skill in the art at the time of invention to utilize an adhesive on the tape which is patterned onto a backing and, wherein at least one surface of the tape comprises portions that are coated with adhesive and portions that are not coated with adhesive as taught by Dizio et al. onto the combined system of Benavides et al. and Orwar et al. in order to reduce the surface

contact between the transfer surface and the adhesive (DiZio et al. , Col. 5, Lns. 9-20) to have a better transfer of adhesive during the manufacturing process when joining the microfluidic and macroscale devices.

Claim 54 is rejected under 35 U.S.C. 103(a), in an alternative reading of the claims, as being unpatentable over Benavides et al. (6,443,179) in view of Orwar et al. (Anal. Chem 2002, 74, 6133-6138) and further in view of Stanto et al. (US 2003/0087239).

Benavides et al. and Orwar et al. disclose all of the features of the claimed invention although is silent to a system having the sensor be a cell based biosensor is a receptor (Para.0210).

Stanton et al. disclose a microfluidic device which teaches the use of a biosensor that is a receptor, the GPCR sensor is a cell based biosensor which is a receptor.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a cell based biosensor which is a receptor as taught by Stanton et al. into the combined system of Benavides et al. and Orwar et al. in order to distinguish the class of G. alpha proteins (Stanton, para.0212)

Double Patenting

Applicant is advised that should claims 28 and 29 be found allowable, claims 48,49 and 57 will be objected to under 37 CFR 1.75 as being a substantial duplicate

thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 28,29,48,49 and 57 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over the device of patented claim 3 of U.S. Patent No. 7,563,614 to Orwar et al. in view of Benavides et al. (6,443,179). The device of claim 3 of Orwar et al. includes the features of a substrate for changing a solution environment around a sensor, the substrate comprising a plurality of microchannels, each microchannel comprising an outlet, and at least one sensor chamber, wherein the outlets of the microchannels intersect with at least one of the sensor chambers, a scanning mechanism for selectively exposing a sensor to multiple fluid streams from the plurality of microchannel outlets. The features of claim 3 are silent to having a macroscale device which is interfaced with a microfluidic device using double-sided tape or transfer tape to form a stable association between the microfluidic device and the macroscale device, wherein the double sided tape comprises a first adhesive surface which associates with the macroscale device and a second adhesive surface which associates with the microfluidic device, wherein the microfluidic device has a plurality of microchannels suitable for containing a fluid stream, and wherein each microchannel comprises an outlet "for delivering a substantially separate aqueous stream into the sensor chamber", and at least one sensor.

Benavides et al. disclose, as shown in Figure 21 a macroscale device (110,120 having a tubing outer diameter of 1/16 of an inch), which is interfaced with a microfluidic (100) device using double-sided tape (26, Col.8, Lns. 30-34) or transfer tape (Col.7, Lns. 61-65) to form a stable association between the microfluidic device and the macroscale device, wherein the double sided tape comprises a first adhesive surface which associates with the macroscale device and a second adhesive surface which associates with the microfluidic device, wherein the microfluidic device has a plurality of microchannels (Col.11, Lns. 58-63, Col. 12, Lns. 6-11) suitable for containing a fluid stream, and wherein each microchannel comprises an outlet (Col. 11, Lns. 63-65) "for delivering a substantially separate aqueous stream into the sensor chamber", and at least one sensor (Col. 11, Lns. 54-56), wherein the sensor is a cell based biosensor.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute a macroscale device which is interfaced with a microfluidic device using double-sided tape or transfer tape to form a stable association between the microfluidic device and the macroscale device, wherein the double sided tape comprises a first adhesive surface which associates with the macroscale device and a second adhesive surface which associates with the microfluidic device, wherein the microfluidic device has a plurality of microchannels suitable for containing a fluid stream, and wherein each microchannel comprises an outlet as taught by Benavides et al. with the substrate of Orwar et al. in order to provide for a "standardized electro-microfluidic package that can be plugged into a fluidic printed wiring board (Benavides et al, Col. 4, Lns. 36-38).

Response to Arguments

Applicant's arguments with respect to claims 28, 29, 35, 37, 38, 40-43,45-51, 54,56-59 filed 1/11/2012 are not persuasive.

Applicant's argument regarding that none of the references teach a system comprising at least one sensor wherein the sensor is a cell based biosensor, is not persuasive as Benavides discloses that the fluid in the device can include blood cells (Col. 11, Lns. 54-56), which is considered as being a cell based biosensor in as much as applicant has defined this limitation, and further the blood cells are a receptor, in that within a blood cell, inherently there are receptors such as B cells (BCR) and T cells (TCR).

Applicant's argument regarding that Stanton fails to teach that the cell based biosensor is a receptor, but rather discloses that the riboreporter is a receptor which could be made for a GPCR is not persuasive, because in para.0212 a GPCR is being used to activate G. alpha proteins.

Applicant's arguments regarding the double patenting rejection are not persuasive as the examiner's position is that the claims are substantial duplicates thereof and do not differ in scope to cover different embodiments as described by applicant.

The examiner notes that the applicant has stated that once allowable subject matter has been determined that a terminal disclaimer will be filed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Craig Price whose telephone number is (571) 272-2712. The examiner can normally be reached on 8AM - 4:30PM M-Fri, Increased flex time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Hepperle can be reached on (571) 272-4913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/CP/ 23 January 2012 /Craig M Schneider/
Primary Examiner, Art Unit 3753

/C. P./
Examiner, Art Unit 3753